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27195 TUROCY & W	7590 06/24/200 ATSON, LLP	EXAMINER		
127 Public Squa	are	MORAN, RANDAL D		
57th Floor, Key Tower CLEVELAND, OH 44114			ART UNIT	PAPER NUMBER
			2435	
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			06/24/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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	Application No.	Applicant(s)	
	10/797,767	HELLAND ET AL.	
Office Action Summary	Examiner	Art Unit	
	RANDAL D. MORAN	2435	
The MAILING DATE of this communication a Period for Reply	ppears on the cover sheet with t	he correspondence address	
A SHORTENED STATUTORY PERIOD FOR REF WHICHEVER IS LONGER, FROM THE MAILING - Extensions of time may be available under the provisions of 37 CFR after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period. - Failure to reply within the set or extended period for reply will, by stat Any reply received by the Office later than three months after the mai earned patent term adjustment. See 37 CFR 1.704(b).	DATE OF THIS COMMUNICAT 1.136(a). In no event, however, may a reply but will apply and will expire SIX (6) MONTHS tute, cause the application to become ABAND	TION. De timely filed from the mailing date of this communication. ONED (35 U.S.C. § 133).	
Status			
1) ☐ Responsive to communication(s) filed on <u>01</u> 2a) ☐ This action is FINAL . 2b) ☐ The street of	nis action is non-final. vance except for formal matters,		
Disposition of Claims			
4) ☐ Claim(s) 1-3,5-11,14-16 and 18-28 is/are pe 4a) Of the above claim(s) is/are withden 5) ☐ Claim(s) is/are allowed. 6) ☐ Claim(s) 1-3,5-11,14-16 and 18-28 is/are rej 7) ☐ Claim(s) is/are objected to. 8) ☐ Claim(s) are subject to restriction and	rawn from consideration.		
Application Papers			
9) The specification is objected to by the Exami 10) The drawing(s) filed on is/are: a) and an applicant may not request that any objection to the Replacement drawing sheet(s) including the correction. The oath or declaration is objected to by the	ccepted or b) objected to by the drawing(s) be held in abeyance. ection is required if the drawing(s) is	See 37 CFR 1.85(a). s objected to. See 37 CFR 1.121(d).	
Priority under 35 U.S.C. § 119			
12) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of: 1. Certified copies of the priority docume 2. Certified copies of the priority docume 3. Copies of the certified copies of the priority docume application from the International Bure * See the attached detailed Office action for a li	ents have been received. ents have been received in Appli riority documents have been rec eau (PCT Rule 17.2(a)).	cation No eived in this National Stage	
Attachment(s) 1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date	4) Interview Sumr Paper No(s)/Ma 5) Notice of Inform 6) Other:		

DETAILED ACTION

Claims 1-3, 5-11, and 14-16, and 18-28 are pending in the application.

Below, Examiner has pointed out particular references contained in the prior art(s) of record in the body of this action for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claims, other passages and figures may apply as well. Applicant should consider the entire prior art as applicable as to the limitations of the claims. It is respectfully requested from the applicant, in preparing the response, to consider fully each reference in its entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior arts or disclosed by the examiner.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/1/2009 has been entered.

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Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- 1. Claims 1, 2, 11, 13, 14, 18, 26, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Stallings, William. *Cryptography and Network Security; Third Edition*. Chapter 9 / Public-Key Cryptography: 9.1: Principles of Public-Key Cryptosystems. Upper Saddle River, NJ. Prentice Hall, 2003. Pgs. 259-265, 290-293, 444, and 655. Hereafter "Stallings".

Considering **Claim 1**, Stallings discloses a message encryption system (p.260-lines 28-36, p. 265- Figure 9.4) comprising: a binding component that creates a remote service binding between a user's digital certificate and a remote service associated with a target system(p. 264- lines 18-23, p. 265- lines 1-17, Fig. 9.4- item Z, according the instant specification [0124] from the PG Pub US 2005/0204139, creating of the remote binding only requires the initiator to determine that the target public key will be used to authenticate the connection. In Fig. 9.4, the public key of the target is further used to encrypt the message), the remote service binding specifying that the user's digital certificate is to be used when a dialog is initiated between the initiator system and the remote service; a session key generator that generates a session key for a dialog between the initiator system and the remote service at the target system, the session key employed to securely exchange a message associated with a dialog (p. 265- lines

18-19); and, an encryption component that employs asymmetric encryption to encrypt the session key using a private key associated with the initiator system to yield a first session key encryption, encrypt the first session key encryption using the public key specified by the remote service binding to yield an encrypted session key output, and securely transmit the encrypted session key output to the target system(p. 292- lines 23-27, p. 293- lines 1-11, Fig. 10.6- (4)), the session key thereafter being employed to encrypt the message and securely exchange the message between the initiator system and the target system (p. 444- lines 19-21, p.655- line 21), the encryption component encrypts the message using the session key to yield a first message encryption, and subsequently encrypts the first message encryption using the private key associated with the initiator system to yield an encrypted message output (p. 264- lines 18-23, p. 265- lines 1-2, Fig. 9.4- item Z, according the instant specification [0124] from the PG Pub US 2005/0204139, creating of the remote binding only requires the initiator to determine that the target public key will be used to authenticate the connection. In Fig. 9.4, the public key of the target is further used to encrypt the message).

Considering Claim 14, the combination discloses a message decryption system (p. 260- lines 25-36, p. 265- Fig. 9.4) comprising: a session key employed to securely exchange a message associated with a dialog between an initiator system and a remote service running on a target system (p. 264- lines 18-23, p. 265- lines 1-17, Fig. 9.4- item Z, according the instant specification [0124] from the PG Pub US 2005/0204139, creating of the remote binding only requires the initiator to determine that the target public key will be used to authenticate the connection. In Fig. 9.4, the public key of the

target is further used to encrypt the message), the session key twice encrypted using a private key associated with the initiator system and a public key specified according to a remote service binding that associates the public key with the remote service running on the target system; (p. 265-lines 18-19); and, a decryption component that receives the encrypted version of the session key from the initiator system, employs asymmetric decryption to decrypt the encrypted session key using a private key associated with the target system to yield a first session key decryption, and decrypts the first session key decryption using a public key associated with the initiator system to yield the session key (p. 292- lines 23-27, p. 293- lines 1-11), the session key thereafter being employed to decrypt a received encoded version of the message (p. 444- lines 19-21, p. 655- lines 21), wherein the decryption component decrypts the encoded version of the message using the session key to yield a first message decryption, and subsequently decrypts the first message decryption using the public key associated with the initiator system to yield the message (p. 264- lines 18-23, p. 265- lines 1-17, Fig. 9.4- item Z, according the instant specification [0124] from the PG Pub US 2005/0204139, creating of the remote binding only requires the initiator to determine that the target public key will be used to authenticate the connection. In Fig. 9.4, the public key of the target is further used to encrypt the message).

Considering Claims 18 and 21, the combination discloses a method facilitating session key encryption comprising (p. 444- lines 19-21): employing a processor executing computer-executable instructions stored on a computer-readable storage medium to implement the following acts: establishing a remote service

binding at a first system that binds a service running on a second system with a particular user's digital certificate (p. 264- lines 18-23, p. 265- lines 1-17, Fig. 9.4- item Z, according the instant specification [0124] from the PG Pub US 2005/0204139, creating of the remote binding only requires the initiator to determine that the target public key will be used to authenticate the connection. In Fig. 9.4, the public key of the target is further used to encrypt the message); initiating a dialog at the first system with the service running on the second system: identifying the digital certificate bound to the service upon initiating the dialog; firstly encrypting a symmetric session key with a private key associated with an initiator of the dialog to yield a first encryption (p. 264lines 18-23); secondly encrypting a result of the first encryption with a public key associated with the identified digital certificate to yield a second encryption (p. 264- lines 18-23, p. 265- lines 1-2); and, transmitting a result of the first encryption from the first system to the second system; and employing the session key to encrypt and decrypt messages between the first system and the second system that access the service running on the second system (p. 264- lines 18-23, p. 265- lines 1-2, Fig. 9.4- item Z, according the instant specification [0124] from the PG Pub US 2005/0204139, creating of the remote binding only requires the initiator to determine that the target public key will be used to authenticate the connection. In Fig. 9.4, the public key of the target is further used to encrypt the message).

Considering **Claim 26**, the combination discloses a computer readable medium encoded with a data structure that facilitates secure distributed communication, the data packet comprising: a first data field comprising a remote service binding that associates

a service running on a remote system with a particular user's public key (p. 264- lines 18-23, p. 265- lines 1-17, Fig. 9.4- item Z, according the instant specification [0124] from the PG Pub US 2005/0204139, creating of the remote binding only requires the initiator to determine that the target public key will be used to authenticate the connection. In Fig. 9.4, the public key of the target is further used to encrypt the message); and a data field comprising an encrypted session key, the session key encrypted using a private key associated with an initiator of a message to the service and the public key associated with the service by the remote service binding; a data field comprising an encrypted message, the encrypted message first encrypted with the session key (p. 265- Fig. 9.4), then encrypted with the private key associated with the initiator of the message (p. 265 - lines 15-17), the message comprising a digital certificate (Bentley [0090]) that is employed as part of a broker service security system that facilitates location transparency of the services (p. 264- lines 18-23, p. 265- lines 1-2, Fig. 9.4- item Z, according the instant specification [0124] from the PG Pub US 2005/0204139, creating of the remote binding only requires the initiator to determine that the target public key will be used to authenticate the connection. In Fig. 9.4, the public key of the target is further used to encrypt the message).

Considering **Claim 27**, the combination discloses a message decryption system (p. 260- lines 25-36, p. 265- Fig. 9.4) comprising: means for creating a remote service binding that associates a service running on a first system with a particular public key; means for initiating a message exchange between the first system and a second system, the message exchange involving access to the service running on the first

system (p. 264- lines 18-23, p. 265- lines 1-17, Fig. 9.4- item Z, according the instant specification [0124] from the PG Pub US 2005/0204139, creating of the remote binding only requires the initiator to determine that the target public key will be used to authenticate the connection. In Fig. 9.4, the public key of the target is further used to encrypt the message); means for receiving an encrypted session key from the second system, the encrypted session key encrypted using a private key associated with the second system and the public key associated with the service by the remote service binding; (p. 264- lines 18-23, Fig. 9.4- item Z); means for decrypting the encrypted session key using a private key associated with the first system to yield a first decryption (p. 264- lines 18-23, p. 265- lines 1-2, Fig. 9.4); means for decrypting the first decryption with a public key associated with the second system to yield a second decryption (p. 265- Fig. 9.4); means for securely storing a result of the second decryption as a session key (p. 292-lines 23-27, p. 293-lines 1-11, Fig. 10.6- (4)); and, means for employing the session key to decrypt an encrypted message received by the second system (p. p. 444- lines 19-21, p. 655- line 21), the encrypted message encrypted using the session key and a private key securely associated with the second system (p. 264- lines 18-23, p. 265- lines 1-2, Fig. 9.4- item Z, according the instant specification [0124] from the PG Pub US 2005/0204139, creating of the remote binding only requires the initiator to determine that the target public key will be used to authenticate the connection. In Fig. 9.4, the public key of the target is further used to encrypt the message).

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Considering **Claim 2**, Stallings discloses the session key comprising a 128-bit randomly generated symmetric key (Stallings p. 444- lines 19-30).

Considering **Claim 11**, Stallings discloses (p. 264- lines 18-23) (p. 264- lines 18-23, p. 265- lines 1-2, p. 265- Fig. 9.4) the encryption component separately encrypts the session key with a public key associated with the target system (p. 260- lines 28-28, p. 261- Fig. 9.1) the separate encryption is provided as an output to the target system together with the encrypted session key output (Fig. 9.1, Fig. 9.4).

Considering **Claim 13**, Stallings discloses a broker security system employing the session key of claim 1 (Stallings p.260- lines 28-36, p. 265- Figure 9.4).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 2. Claims 3, 5, 9, 10, 15, 16, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stallings in view of Bentley et al. (US 2003/0217275), hereafter "Bentley."

Considering **Claim 3**, Stallings does not explicitly disclose the remote service binding allows an application to address the remote service using a logical name. Bentley discloses the remote service binding allows an application to address the remote service using a logical name ([0090]).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Stallings by the remote service binding allows an application to address the remote service using a logical name as taught by Bentley for the benefit of streamlining the process of creating signatures and improving quality control (Bentley [0090]).

Considering Claims 5 and 20, the combination discloses the remote service binding created at the initiator system using the following syntax:

Create Remote Service Binding < LOGICAL SERVICE NAME>

To Service '<SERVICE>'

With (User = [<USER>])

where <LOGICAL SERVICE NAME> is a logical name assigned to the service by the binding, <SERVICE> is the remote service, and <USER> is an identification of the user whose public key is to be utilized when a dialog is initiated with the remote service by the initiator system (Stallings p. 265- Fig. 9.4, Bentley- [0090]).

Furthermore, the examiner points out that the differences (code syntax) between the pending application and the combination is only found in the non-functional descriptive material and are not functionally involved in the steps as currently recited in the claims. The operation of the combination would be performed the same regardless whether the data included the same code syntax. Thus, this descriptive material will not distinguish the claimed invention from the prior art in terms of patentability, see In re Gulack, 703 F.2d 1381, 1385, 217 USPQ 401,404 (Fed. Cir. 1983); In re Lowry, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994).

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Considering **Claim 9**, the combination discloses the public key being stored as a digital certificate (Stallings p. 260- lines 30-32, p. 261- Fig. 9.1- Bob's Public Key Ring).

Considering **Claim 10**, the combination discloses the digital certificate being associated with a user via a login protocol (Stallings p. 290, p. 291- lines 1-11).

Considering **Claim 15**, the combination discloses the message comprising a digital certificate employed as part of a broker service security system (Stallings p. 264-lines 18-23, p. 265-lines 1-19, Fig. 9.4).

Considering Claim 16, Stallings discloses the private key being securely associated with the target system (Stallings p. 265- Fig. 9.4).

Considering **Claim 19**, the combination discloses encrypting a message at the first system using the session key to yield a first message encryption, and encrypting the first message encryption at the first system using the private key associated with the identified digital certificate to yield a twice- encrypted message (Stallings p. 265- Fig. 9.4).

3. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stallings and Bentley in view of VanHeyningen et al. (US 2002/0112152), hereafter "VanHeyningen".

Considering **Claim 6**, Stallings and Bentley does not explicitly disclose a plurality of trusted agents that act as a proxy for a publisher to respectively exchange the message with respective subscribers, the trusted agents employing the private key.

VanHeyningen discloses a plurality of trusted agents that act as a proxy for a publisher to respectively exchange the message with respective subscribers ([0092] lines 1-10, [0139] lines 1-8, Fig. 7B), the trusted agents employing the private key ([0039], [0095]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination by a plurality of trusted agents that act as a proxy for a publisher to respectively exchange the message with respective subscribers, the trusted agents employing the private key as taught by VanHeyningen in order to avoid individually delivering messages to each appropriate recipient device in the network (e.g. point-to-point messaging), as this type of communication restricts the speed and efficiency of the invention (VanHeyningen- [0139] lines 1-8).

Considering Claim 7, the combination discloses a trusted agent negotiates a unique session key with a subscriber (VanHeyningen- [0039], [0095]).

Considering **Claim 8**, the combination discloses the trusted agents acting in concert to dynamically load balance distribution for the publisher VanHeyningen ([0091] lines 7-12, Fig. 7B- item 704).

4. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stallings and Bentley in view of Wasilewski et al. (US 5,870,474), hereafter "Wasilewski".

Considering Claim 28, Stallings and Bentley does not explicitly disclose comprising multiple instances of the broker service sharing the same private key such that the application accessing the remote service treats the multiple instances collectively as a unit.

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Wasilewski discloses comprising multiple instances of the broker service sharing the same private key such that the application accessing the remote service treats the multiple instances collectively as a unit (column 22- lines 13-34).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination by deploying multiple instances of the service providers sharing the same private key to provide a system where the STU's (targets) would be unable to distinguish between service providers (initiators) (Wasilewski- column 22- lines 13-34).

Claims 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over
 Stallings, Bentley and VanHeyningen in view of Wasilewski.

Considering Claims 22 and 25, the combination discloses a method facilitating session key decryption comprising (p. 265- lines 18-19, p. 444- lines 19-21): employing a processor executing computer-executable instructions stored on a computer-readable storage medium to implement the following acts: establishing a dialog between a dialog initiator and a service running on a target system(p. 264- lines 18-23, p. 265- lines 1-2, Fig. 9.4- item Z) receiving at the target system an encrypted session key from the dialog initiator, the encrypted session key encrypted using a private key associated with the dialog initiator and a public key specified by a remote service binding that associates the public key with the service running on the target system (p. 264- lines 18-23, p. 265- lines 1-2, Fig. 9.4- item Z, according the instant specification [0124] from the PG Pub US 2005/0204139, creating of the remote binding only requires the initiator to determine that the target public key will be used to authenticate the connection. In

Fig. 9.4, the public key of the target is further used to encrypt the message; decrypting the encrypted session key with a private key associated with the target system to yield a first decryption (p. 264- lines 18-23, p. 265- lines 1-2); decrypting the first decryption with a public key associated with the dialog initiator to yield the decrypted session key (p. 265- Fig. 9.4); employing the decrypted session key together with the public key associated with the dialog initiator (p. 265- lines 5-19) to decrypt a subsequent twice-encrypted message from the dialog initiator (Fig. 9.4), and negotiating a unique session key with each of a subscriber accessing one of the multiple instances of the service broker (VanHeyningen- [0039], [0095]).

The combination does not explicitly disclose deploying multiple instances of a service broker that serve to establish dialogs between subscribers and the dialog initiator; sharing the private key associated with the dialog initiator with the multiple instances of the service broker.

Wasilewski discloses deploying multiple instances of a service broker that serve to establish dialogs between subscribers and the dialog initiator; sharing the private key associated with the dialog initiator with the multiple instances of the service broker (column 22- lines 13-34).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination by deploying multiple instances of the service providers sharing the same private key to provide a system where the STU's (targets) would be unable to distinguish between service providers (initiators) (Wasilewski- column 22- lines 13-34).

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Considering Claim 23, the combination discloses the private key being securely associated with a target of the message (Stallings- p. 265- Fig. 9.4).

Considering **Claim 24**, the combination discloses the public key being associated with an initiator of the message (Stallings- p. 265- Fig. 9.4).

Response to Arguments

Applicant's arguments filed 5/1/2009 have been fully considered but they are not persuasive.

Regarding Claims 1, 14, 18, 22, 26, and 27, applicant's arguments have been fully considered but are not persuasive. With respect to applicant's argument that Stallings fails to teach a binding component that creates a remote service binding between a user's digital certificate and a remote service associated with a target system... the remote service binding specifying that the user's digital certificate is to be used when a dialog is initiated between the initiator system and the remote service, applicant is directed to Stallings - p. 264- lines 18-23, p. 265- lines 1-2, Fig. 9.4- item Z. According to the instant specification, [0124] from the PG Pub US 2005/0204139, creating of the remote binding only requires the initiator to determine that the target public key will be used to authenticate the connection. Stallings - Fig. 9.4 discloses the public key of the target is further used to encrypt the message. The creation of a remote service binding includes the creation of a secure session between two systems. Stallings discloses the creation of a secure session to allow two systems to communicate securely as described in the claims.

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From the examiner point of view the cited reference clearly teaches the creation of a remote service binding between a user's digital certificate and a remote service associated with the target system. The argued term *remote service binding* must be clearly defined in the claimed language, if applicant believes it differs from the cited one. Applicant is reminded that additional modification to clarify the claimed language is necessary for further consideration and distinction from the prior art.

Regarding **Claim 5**, applicant's arguments have been fully considered but are not persuasive. With respect to applicant's argument that Stallings fails to teach *the remote* service binding created at the initiator system using the following syntax:

Create Remote Service Binding < LOGICAL SERVICE NAME>

To Service '<SERVICE>'

With (User = [< USER >])

where <LOGICAL SERVICE NAME> is a logical name assigned to the service by the binding, <SERVICE> is the remote service, and <USER> is an identification of the user whose public key is to be utilized when a dialog is initiated with the remote service by the initiator system, applicant is directed to Stallings p. 265- Fig. 9.4, Bentley- [0090]. The examiner points out that the differences (code syntax) between the pending application and the combination are only found in the non-functional descriptive material and are not functionally involved in the steps as currently recited in the claims. The operation of the combination would be performed the same regardless whether the data included the same code syntax. Thus, this descriptive material will not distinguish the claimed invention from the prior art in terms of patentability, see In re Gulack, 703 F.2d

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1381, 1385, 217 USPQ 401,404 (Fed. Cir. 1983); In re Lowry, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randal D. Moran whose telephone number is 571-270-1255. The examiner can normally be reached on M-F: 7:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. D. M./ Examiner, Art Unit 2435 6/21/2009

/KIMYEN VU/ Supervisory Patent Examiner, Art Unit 2435